

**Printing ink for forming silver conductor circuit - comprises resin of (modified) alkyd, fatty acid base polyepoxy resin, urethanated oil, rosin and maleic oil, silver flake powder, organosilver cpd., flux and solvents etc.**

Patent Assignee: TANAKA KIKINZOKU KOGYO KK

#### Patent Family

Patent Number	Kind	Date	Application Number	Kind	Date	Week	Type
JP 5311103	A	19931122	JP 92146554	A	19920512	199351	B

Priority Applications (Number Kind Date): JP 92146554 A ( 19920512)

#### Patent Details

Patent	Kind	Language	Page	Main IPC	Filing Notes
JP 5311103	A		5	C09D-011/02	

#### Abstract:

JP 5311103 A

The printing ink comprises (A) at least one resin component selected from alkyd, modified alkyd, fatty acid base epoxy resins, urethanted oil, resin and maleic oil; (B) Ag component, pref. 0.05-1.0 micron dia. spherical powder and/or 0.5-5 micron flaky powder and Ag contg. organic metal cpd., pref. Ag carboxylate, Ag acetylacetone or Ag alkoxide, and/or Ag contg. colloid; (C) flux component, pref. organic metal cpd. and/or glass frit and opt. (D) one or more than two components selected from solvent, leveling agent, polymerisation initiator, oxidn. promoter, anti-skinning agent, thickening agent, metal chelating resin, dispersant and filler. Forming Ag conductor circuits comprises (I) offset printing circuit patterns on a substrate using ink for forming Ag conductor circuits; opt. (I') pressing the printed circuit patterns to make their surfaces flat and smooth; (II) curing the printed patterns by as they are/or by irradiation of active energy radiation, pref. at least one selected from UV, IR and electron rays and/or by heating; (III) overprinting the cured circuit patterns as they are and/or by the same pattern; and (IV) calcining the printed patterns, pref. at a temp. above 300 deg. C is also new.

**USE/ADVANTAGE** - The printing ink for forming Ag conductor circuits and the method for forming Ag conductor circuits using the printing ink are suitable for forming Ag conductor circuits on various substrates which are used in various fields of the electronic industry. The obtd. printed Ag conductor circuits have good surface flatness due to good leveling properties, fine patterns having no defects e.g. wire breaking and reduced resistivity.

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**Basic Patent (Number,Kind,Date): JP 7136194 A2 950530**

**PATENT FAMILY:**

**Japan (JP)**

Patent (Number,Kind,Date): JP 7136194 A2 950530  
DRAIN TRAP AID DEVICE (English)  
Patent Assignee: MORITA TOKYO SEISAKUSHO KK  
Author (Inventor): KADOMA SHIGEYUKI  
Priority (Number,Kind,Date): JP 93311103 A 931118  
Applic (Number,Kind,Date): JP 93311103 A 931118  
IPC: \* A61C-017/00  
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**Basic Patent (Number,Kind,Date): JP 5311103 A2 931122**

**PATENT FAMILY:**

**Japan (JP)**

Patent (Number,Kind,Date): JP 5311103 A2 931122  
PRINTING INK FOR SILVER CONDUCTOR CIRCUIT AND METHOD FOR FORMING  
SILVER CONDUCTOR CIRCUIT (English)  
Patent Assignee: TANAKA PRECIOUS METAL IND  
Author (Inventor): OKUDA AKIHIKO  
Priority (Number,Kind,Date): JP 92146554 A 920512  
Applic (Number,Kind,Date): JP 92146554 A 920512  
IPC: \* C09D-011/02; C09D-005/24; H05K-001/09; H05K-003/12  
CA Abstract No: ; 120(18)220580A  
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JAPIO Reference No: ; 180122C000157  
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**Basic Patent (Number,Kind,Date): JP 54103738 A2 790815**

**PATENT FAMILY:**

**Japan (JP)**

Patent (Number,Kind,Date): JP 54103738 A2 790815  
PRESERVING OF VACUUM MOLDING CORE (English)  
Patent Assignee: SINTOKOGIO LTD  
Author (Inventor): TOMONAGA JIYUNICHI; SUGIURA HAJIME; MAKIGUCHI TADASHI  
Priority (Number,Kind,Date): JP 7811103 A 780202  
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**Basic Patent (Number,Kind,Date): JP 53011103 A2 780201**

**PATENT FAMILY:****Japan (JP)**

Patent (Number,Kind,Date): JP 53011103 A2 780201  
SLAG REMOVING METHOD (English)  
Patent Assignee: KOBE STEEL LTD  
Author (Inventor): HARAGUCHI TOSHIO; TAKAHATA SHINICHI; HIDAISHI TAIZOU;  
NAKANO SHIGERU; SUGAWARA HIROFUMI  
Priority (Number,Kind,Date): JP 7685529 A 760716  
Applic (Number,Kind,Date): JP 7685529 A 760716  
IPC: \* C22B-009/00; B22D-043/00; F27D-003/15  
JAPIO Reference No: \* 020052C000236  
Language of Document: Japanese  
Patent (Number,Kind,Date): JP 81031500 B4 810722  
Priority (Number,Kind,Date): JP 7685529 A 760716  
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IPC: \* F27D-003/15; B22D-043/00  
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**Basic Patent (Number,Kind,Date): JP 51003077 A2 760112**

**PATENT FAMILY:**

**Japan (JP)**  
Patent (Number,Kind,Date): JP 51003077 A2 760112  
PEEPAAKATSUTAA (English)  
Patent Assignee: COPAL CO LTD

Author (Inventor): HASEGAWA TSUNEE; SATO HIROYUKI

Priority (Number,Kind,Date): JP 7472141 A 740624

Aplic (Number,Kind,Date): JP 7472141 A 740624

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